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09/646,665	11/27/2000	Masaaki Higashida	MAT-8014US	5725

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EXAMINER

MILLS, DONALD L

ART UNIT	PAPER NUMBER
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2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/646,665

Applicant(s)

HIGASHIDA ET AL.

Examiner

Donald L. Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 12-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7,17-24,31 and 36 is/are allowed.
- 6) ☒ Claim(s) 1,3-6,12-15,25-30 and 32-35 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 12-15, 25, 26, and 32-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujimoto et al. (US 6,191,903 B1), hereinafter referred to as Fujimoto.

Regarding claims 1, 14, 25, and 34, Fujimoto discloses a recording medium, data transmission apparatus, data receiver and optical disk unit for the transmission of video and other data, which comprises:

Generating a fixed pattern comprising 'm' words (Note: the Examiner interprets a word as one bit. Referring to Figure 3, bits 0-7 and 8-15.)

Generating variable, non-random patterns of predetermined bit structure, each pattern comprising 'n' words (Referring to Figure 3, bits 16-23 and 24-31.)

Generating sync patterns comprising 'q' words, each of the sync patterns formed by combining the fixed pattern and one of the variable patterns (Referring to Figure 3, the synchronization patterns SY0 to SY7 are assigned logical patterns of data comprising a fixed and variable portion; therefore, comprising different composite patterns. See column 5, lines 33-38.)

Adding one of said sync patterns to each of said data packets in a data stream, wherein consecutive ones of said data packets each have added respectively different variable patterns (Referring to Figures 3 and 4, no identical combination of synchronization patterns occurs among contiguous sync frames. See column 5, lines 45-50.)

Wherein the sync patterns are limited to two different sync patterns within three immediately consecutive sync patterns in said data stream (Referring to Figure 12 and 14, when the number of sync frames is reduced to three only two different sync patterns are utilized with the three sync frames in the sector. See column 14, lines 59-65.)

Regarding claim 12, Fujimoto discloses *the method including a step of detecting a sync* (Referring to Figures 2-4, the memory 8 can locate a sync frame by two contiguous synchronization patterns. See column 5, lines 54-56.)

Regarding claims 13 and 15, Fujimoto discloses:

Detecting a sync for examining both of a fixed pattern and a variable pattern of a data received (Referring to Figures 2 and 3, the synchronization pattern is detected to identify the data packet. See column 7, lines 44-47.)

Securing a sync for examining only the fixed pattern (Referring to Figures 2 and 3, during synchronization the synchronization pattern is inherently examined individually in order to determine the value of each bit.)

Wherein step (a) processes the data until the sync is secured and step (b) processes the data after the sync is secured (Referring to Figures 2-4, when correctly detecting contiguous synchronization patterns, the frame number decoder 31 detects a sync frame number equal to the

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count value of the frame counter 32 and controls the frame counter 32 so as to output a frame number based on the detected number. See column 7, lines 61-65.)

Regarding claim 26, Fujimoto discloses *wherein the variable pattern comprises a plurality of words, and the variable patterns are made by changing an order of the words* (Referring to Figure 3, the synchronization patterns SY0 to SY7 are assigned logical patterns of data comprising a variable portion, with different bit patterns, comprised of different composite patterns. See column 5, lines 33-38.)

Regarding claim 32, Fujimoto discloses *the method including a step of detecting a sync* (Referring to Figures 2-4, the memory 8 can locate a sync frame by two contiguous synchronization patterns. See column 5, lines 54-56.)

Regarding claims 33 and 35, Fujimoto discloses further teaches comprising:

Detecting a sync for examining both of a fixed pattern and a variable pattern of a data received (Referring to Figures 2 and 3, the synchronization pattern is detected to identify the data packet. See column 7, lines 44-47.)

Securing a sync for examining only the fixed pattern (Referring to Figures 2 and 3, during synchronization the synchronization pattern is inherently examined individually in order to determine the value of each bit.)

Wherein step (a) processes the data until the sync is secured and step (b) processes the data after the sync is secured (Referring to Figures 2-4, when correctly detecting contiguous synchronization patterns, the frame number decoder 31 detects a sync frame number equal to the count value of the frame counter 32 and controls the frame counter 32 so as to output a frame number based on the detected number. See column 7, lines 61-65.)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-6 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 6,191,903 B1), hereinafter referred to as Fujimoto.

Regarding claims 3 and 27 as explained in the rejection statements of claims 1 and 25, Fujimoto discloses all of the claim limitations of claims 1 and 25 (parent claims).

Fujimoto does not disclose *wherein the fixed pattern comprises three words*.

Fujimoto teaches, referring to Figure 3, the synchronization patterns SY0 to SY7 are assigned logical patterns of data comprising a fixed portion (bits 1-15) comprised of two fixed bytes (words) (See column 5, lines 33-38.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement additional bits in the synchronization pattern Fujimoto. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to provide synchronization in error prone sectors, thereby, providing greater error correction capability.

Regarding claim 4 and 28 as explained in the rejection statements of claims 1 and 25, Fujimoto discloses all of the claim limitations of claims 1 and 25 (parent claims).

Fujimoto does not disclose *wherein the three words include 'eb', 'cb' and 'aa', expressed in a hexadecimal notation*.

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Fujimoto teaches, referring to Figure 3, the synchronization patterns **SY0** to **SY7** are assigned logical patterns of data comprising a fixed portion (bits 1-15) comprised of two fixed bytes (words) (See column 5, lines 33-38.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine three different arbitrary fixed patterns in the synchronization pattern of Fujimoto. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to provide synchronization in error prone sectors, thereby, providing greater error correction capability.

Regarding claim 5 and 29 as explained in the rejection statements of claims 1 and 25, Fujimoto discloses all of the claim limitations of claims 1 and 25 (parent claims).

Fujimoto does not disclose *wherein the variable pattern comprises five words*.

Fujimoto teaches the synchronization patterns **SY0** to **SY7** are assigned logical patterns of data comprising a variable portion (bits 16-31), two bytes, comprised of different composite patterns. (See column 5, lines 33-38.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the length of the synchronization pattern to comprise five words in the system of Fujimoto. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to provide synchronization in error prone sectors, thereby, providing greater error correction capability.

Regarding claim 6 and 30 as explained in the rejection statements of claims 1 and 25, Fujimoto discloses all of the claim limitations of claims 1 and 25 (parent claims).

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Fujimoto does not disclose *wherein the five words include '4c', 'ea', 'cd', '7a' and '81', expressed in a hexadecimal notation.*

Fujimoto teaches the synchronization patterns **SY0** to **SY7** are assigned logical patterns of data comprising a variable portion (bits 16-31), two bytes, comprised of different composite patterns (See column 5, lines 33-38.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the length of the synchronization pattern to comprise five arbitrary words in the system of Fujimoto. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to provide synchronization in error prone sectors, thereby, providing greater error correction capability.

Allowable Subject Matter

5. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. Claims 7, 17-24, 31, and 36 are allowed.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 3-6, 12-15, 25-30, and 32-35 have been considered but are moot in view of the new ground(s) of rejection as necessitated by the amendments to the independent claims.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Mills whose telephone number is 571-272-3094. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Donald L Mills/

July 5, 2007



CHI PHAM
SUPERVISORY PATENT EXAMINER

7/9/07